

WHAT IS CLAIMED IS:

1. A method of controlling the operation of a dryer including both a variable heat source and a variable speed blower, said method comprising varying only one of the variable heat source and the variable speed blower, while maintaining the other one in a fixed state.

2. A method in accordance with Claim 1 further comprising:

fixing the variable heat source in a fixed state;

varying a speed of the variable speed blower;

monitoring the dryer for the occurrence of a heat event;

fixing the speed of the variable speed blower when the heat event occurs; and

varying the variable heat source when the blower is in the fixed state.

3. A method in accordance with Claim 2 wherein the heat event occurs when a predetermined maximum temperature associated with the dryer is exceeded.

4. A dryer for tumble drying articles comprising:

a drum comprising a cavity configured to hold articles to be dried;

a first motor drivingly coupled to said drum to rotate said drum;

a variable heat source in flow communication with said cavity; and

a variable speed motor drivingly coupled to a blower positioned to deliver air heated by said heat source to said cavity.

5. A dryer in accordance with Claim 4 further comprising a controller operatively coupled to said variable speed motor and said variable heat source and at least one temperature sensor operatively coupled to said controller and positioned to sense a temperature associated with the dryer and generate a temperature signal representative of the sensed temperature, said controller operable to receive the temperature signal and control one of said variable speed motor and said variable heat source based on the temperature signal.

6. A dryer in accordance with Claim 4 further comprising a controller operatively coupled to said variable speed motor and said variable heat source and at least one pressure sensor operatively coupled to said controller and positioned to sense a pressure associated with the dryer and configured to generate a pressure signal representative of the sensed pressure, said controller operable to receive the pressure signal and control one of said variable speed motor and said variable heat source based on the pressure signal.

7. A dryer in accordance with Claim 6 further comprising at least one temperature sensor operatively coupled to said controller and positioned to sense a temperature associated with the dryer and generate a temperature signal representative of the sensed temperature, said controller operable to receive the temperature signal and control one of said variable speed motor and said variable heat source based on the pressure signal and the temperature.

8. A dryer in accordance with Claim 7 wherein said temperature signal is representative of a cavity inlet air temperature.

9. A dryer in accordance with Claim 7 wherein said temperature signal is representative of a cavity outlet air temperature.

10. A dryer in accordance with Claim 7 wherein said pressure signal is representative of a cavity outlet duct pressure.

11. A dryer control system for a tumble type dryer having a variable heat source and a variable speed blower motor driving the blower to supply air heated by the heat source to the dryer cavity through a cavity inlet and exhaust air from the dryer cavity through a cavity outlet, said system comprising:

at least one temperature sensor positioned to sense a temperature associated with the dryer and configured to generate a temperature signal representative of the sensed temperature;

at least one pressure sensor positioned to sense a pressure associated with the dryer and configured to generate a pressure signal representative of the sensed pressure; and

a controller operatively coupled to said at least one temperature sensor and said at least one pressure sensor and configured to receive the temperature and

pressure signals and control the operation at least one of the variable speed blower motor and the variable heat source based on at least one of the received signals.

12. A dryer control system in accordance with Claim 11 wherein the temperature signal is representative of a cavity inlet air temperature.

13. A dryer control system in accordance with Claim 11 wherein the temperature signal is representative of a cavity outlet air temperature.

14. A dryer control system in accordance with Claim 11 wherein said controller regulates the operation of the variable speed blower motor and said variable heat source based on the temperature signal to maintain the temperature below a predetermined maximum temperature.

15. A heater control for a tumble type dryer comprising:

a heater element supplying heated air to a drum comprising a cavity;

at least one temperature sensor providing a signal indicative of cavity outlet temperature; and

a controller operatively coupled to said heater element and said at least one temperature sensor and configured to vary at least one of a voltage and a current to said heater element based on said signal from said temperature sensor to substantially maintain a predetermined cavity outlet temperature.

16. A heater control in accordance with Claim 15 wherein said controller is further configured to receive a signal from a user representing a fabric type and substantially maintain a predetermined cavity outlet temperature based on the received signal representative of fabric type.

17. A heater control in accordance with Claim 15 wherein said voltage is gradually reduced to substantially maintain said predetermined cavity outlet temperature.

18. A heater control in accordance with Claim 17 wherein said voltage is gradually reduced linearly.

19. A heater control in accordance with Claim 15 wherein said current is gradually reduced to substantially maintain said predetermined cavity outlet temperature.

20. A heater control in accordance with Claim 19 wherein said current is gradually reduced linearly.

21. A heater control in accordance with Claim 15 further comprising a moisture sensor providing a signal indicative of remaining moisture content in said cavity, said controller further configured to turn off said heater element when a predetermined moisture content is reached.

22. A method for controlling a clothes dryer including a variable blower, a variable heater, and a drum having a cavity configured for holding articles, said method comprising:

installing a controller on the dryer operatively coupled to the blower and heater and in communication with a cavity inlet temperature sensor providing a signal indicative of cavity inlet temperature and a cavity outlet temperature sensor providing a signal indicative of cavity outlet temperature;

establishing a predetermined maximum cavity inlet temperature and a predetermined maximum cavity outlet temperature;

receiving a signal in the controller from the inlet and outlet temperature sensors;

controlling the blower duty based on the received temperature sensor signals to attempt to maintain the cavity inlet and outlet temperatures below the respective predetermined maximum temperatures; and

controlling the heater element to maintain the cavity inlet and outlet temperatures below the respective predetermined maximum temperatures when the attempt to maintain the cavity inlet and outlet temperatures below the respective predetermined maximum temperatures by controlling blower duty is unsuccessful.

23. A dryer control system for a tumble type dryer having a variable heat source and a variable speed blower motor driving the blower to supply air heated

by the heat source to the dryer cavity through a cavity inlet and exhaust air from the dryer cavity through a cavity outlet, said system comprising:

at least one temperature sensor positioned to sense a temperature associated with the dryer and configured to generate a temperature signal representative of the sensed temperature; and

a controller operatively coupled to said at least one temperature sensor and configured to receive the temperature signals, said controller configured to control the operation at least one of the variable speed blower motor and the variable heat source in a plurality of control modes based on the received signals.

24. A dryer control system in accordance with Claim 23 wherein said plurality of control modes includes a warm-up mode, a blower control mode, and a heater control mode.

25. A dryer control system in accordance with Claim 24 wherein said controller is configured to select one of said modes based on the occurrence of a heat event.